

REMARKS

Reconsideration of the application is requested.

Claims 1, 4-16, 67, and 68 are now in the application. Claims 1, 4-16, 67, and 68 are subject to examination. Claims 12-14 have been amended. Claims 67 and 68 have been added.

Under the heading "Claim Rejections – 35 USC § 103" on page 2 of the above-identified Office Action, claims 1, 4-16, 44, and 45 have been rejected as being obvious over International Publication No. WO 01/59737 A1 to Cole in view of U.S. Patent No. 7,075,445 B2 to Booth et al. and further in view of U.S. Patent No. 4,679,939 to Curry et al. under 35 U.S.C. § 103. Applicant respectfully traverses.

Applicant will first discuss the rejection of claims 1, 15, and 16. Even if there were a suggestion to combine the teachings in the references, the invention as defined by claims 1, 15 and 16 would not have been obtained.

Booth et al. teach activating a smoke sensing element 620 to take, in an ON-OFF sampling sequence, time displaced groups of smoke samples. The OFF sampling interval provides detector values representing chamber background noise. The averaged OFF interval value is subtracted from the averaged ON interval value in order to eliminate the background noise (See column 21, line 63-column 22, line 21).

It is clear that there is not a sample in the detection chamber during the OFF intervals. Booth et al. teach subtracting an averaged signal in which no samples are illuminated from an averaged signal in which samples are illuminated. This is not what is claimed in this application.

Claims 1, 15 and 16 specify that the “same sample” is illuminated with first and second wavelengths of light and that the resulting response signals are subtracted. Booth et al. do not teach this claimed feature nor do any of the other cited documents. As discussed above, Booth et al. do not teach subtracting two signals resulting from different illuminations of a sample. Therefore, even if the teachings in the cited prior art were combined, in some manner, for some reason, the invention as defined by claims 1, 15 and 16 would not have resulted.

There is simply no teaching in the prior art that would have enabled one of ordinary skill in the art to obtain the claimed invention.

Applicant also points out that the teaching of Curry et al. does not even relate to smoke detection, and for this additional reason, applicant believes that one of ordinary skill in the art would not have obtained a suggestion for incorporating the teachings therein. Applicant also asserts that there is no logical connection between subtracting signals and using polarized light and

that therefore, without a further teaching, one of ordinary skill in the art would not have combined the references in the manner alleged by the Examiner.

Claims 12-14 have been amended to correct the spelling of the word polarized.

Applicant will now discuss the rejection of claim 12. The Examiner has alleged that claim 2 on page 20 of International Publication No. WO 01/59737 A1 discloses that the first illumination is a relatively longer wavelength that is horizontally polarized and the second illumination is a relatively short wavelength that is vertically polarized. Applicants respectfully point out that this allegation is not correct. Claim 2 on page 20 of International Publication No. WO 01/59737 A1 only discloses that the first and second illuminations are of different polarization and are of different wavelengths. There is no teaching as to which wavelength is vertically polarized and to which wavelength is horizontally polarized. The teaching on page 6, lines 25-31 of WO 01/59737 A1 is also silent as to which wavelength is horizontally polarized and which wavelength is vertically polarized. In contrast to the invention as defined by claim 12, WO 01/59737 A1 does not teach providing the first illumination as a relatively longer wavelength that is horizontally polarized and the second illumination as a relatively short wavelength that is vertically polarized. Therefore even if there were a suggestion to combine the teachings in the cited prior art, the invention as defined by claim 12 would not have been suggested.

Furthermore, even though WO 01/59737 does teach that different wavelengths can be differently polarized in some way - there is no teaching of any synergistic effect or advantage of doing so. Therefore, applicant believes that one of ordinary skill in the art would not have obtained a suggestion to incorporate the actual feature taught by WO 01/59737, and as discussed above, even if the feature that is actually taught were incorporated, the invention as defined by claim 12 would not have resulted.

Claims 67 and 68 have been added to even further distinguish the invention from the prior art. Support for the added claims can be found by referring to claim 12. Applicant believes that claims 67 and 68 are patentable for the reasons discussed above with regard to claim 12 and the teaching in WO 01/59737 A1.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 15, or 16. Claims 1, 15, and 16 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1, 15, or 16.

In view of the foregoing, reconsideration and allowance of claims 1, 4-16, 67, and 68 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stermer LLP, No. 12-1099.

Respectfully submitted,

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